

CLAIMS:

1. A working assembly for a fire fighting vehicle having a boom system, the working assembly comprising:
 - 5 a frame mounted to an end portion of the boom system, the frame having a first end, a second end and a midpoint between the first and second ends;
 - a mechanical actuator mounted to the frame; and
 - a tool connected to the mechanical actuator, the tool configured to pierce an exterior of a structure via movement of the mechanical actuator.
- 10 2. The working assembly of claim 1, wherein the mechanical actuator is a hydraulic cylinder, the hydraulic cylinder supported between the first end and the midpoint of the frame, the hydraulic cylinder having a piston rod extendable toward the second end of the frame.
- 15 3. The working assembly of claim 1, wherein the frame is pivotally mounted to the end portion of the boom system.
- 20 4. The working assembly of claim 3, wherein the midpoint of the frame is pivotally mounted to the end portion of the boom system.
5. The working assembly of claim 4, wherein the frame further comprises a rotary actuator secured at the midpoint of the frame.

6. The working assembly of claim 2, wherein the tool comprises a lance having a first end configured to deliver a fluid and a second end connected to the piston rod of the hydraulic cylinder.

5 7. The working assembly of claim 6, wherein the lance comprises a hollow body, the hollow body having a port for connection to a fluid source, the hollow body having at least one opening at the first end of the lance for delivery of fluid.

10 8. A working assembly for a fire fighting vehicle having a boom system, the working assembly comprising:

a frame mounted to an end portion of the boom system, the frame having a first end, a second end and a midpoint between the first and second ends;

15 a hydraulic cylinder having a piston rod, the hydraulic cylinder mounted to the frame near the first end of the frame, the piston rod being extendable toward the second end of the frame; and

a lance configured for connection to a fluid source, the lance having a first end connected to the piston rod of the hydraulic cylinder and a
20 second end configured to pierce an exterior surface of a structure when the piston rod is extended toward the second end of the frame.

9. The working assembly of claim 8, wherein the frame is pivotally mounted to the end portion of the boom.

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10. The working assembly of claim 9, wherein the midpoint of the frame is pivotally mounted to the end portion of the boom system.

11. The working assembly of claim 10, wherein the frame further comprises a rotary actuator secured at the midpoint of the frame.

12. The working assembly of claim 8, wherein the second end of the lance is configured to deliver a fluid.

13. The working assembly of claim 8, wherein the lance comprises a hollow body, the hollow body having a port for connection to a fluid source, the hollow body having at least one opening at the second end of the lance for delivery of fluid.

14. A working assembly for a fire fighting vehicle having a boom system, the working assembly comprising:
a frame mounted to an end portion of the boom system, the frame having a first end, a second end and a midpoint between the first and second ends; and
means connected to the frame for piercing through an exterior surface of a structure.

15. The working assembly of claim 14, wherein the frame is pivotally mounted to the end portion of the boom system.

16. The working assembly of claim 15, wherein the midpoint of the frame is pivotally mounted to the end portion of the boom system.

17. The working assembly of claim 16, wherein the frame further comprises a rotary actuator secured at the midpoint of the frame.

18. The working assembly of claim 14, wherein the means for piercing through the exterior surface of a structure comprises:

a hydraulic cylinder having a piston rod, the hydraulic cylinder mounted to the frame near the first end of the frame, the piston rod being extendable toward the second end of the frame; and

a lance configured for connection to a fluid source, the lance having a first end connected to the piston rod of the hydraulic cylinder and a second end configured to pierce an exterior surface of a structure when the piston rod is extended toward the second end of the frame.

19. The working assembly of claim 18, wherein the lance comprises a hollow body, the hollow body having a port for connection to a fluid source, the hollow body having at least one opening at the first end of the lance for delivery of fluid.